

CUSTOMER NO.: 24498
Serial No. 09/942,886
Office Action dated: August 30, 2006
Response dated: November 8, 2006

PATENT
PU010164

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (cancelled)

2. (cancelled) The method of claim 3, wherein at least one of said at least one group of packets forming said bitstream are correlated with channel identification and time of transmission information for, respectively, indicating which of said plurality of available transmission channels will carry respective packet groups and the time said at least one group of packets are carried.

3. (currently amended) A method comprising:

associating each of at least one group of packets forming a bitstream with a stream identifier and a respective sequence code, said at least one group of packets comprising at least one bitstream packet;

transmitting, via any one of a plurality of available transmission channels, each of said at least one group of packets, said transmission channels nominally transmitting NULL packets in the event of underutilization, said at least one group of packets being transmitted in place of said nominally transmitted NULL packets to minimize the underutilization of said transmission channels; and

adapting a packet structure for at least one packet of said at least one group of packets to conform to a network packet structure suitable for use by said transmission channels,

wherein said network packet structure includes transmission channel and time of transmission information for identifying a particular one or more of the plurality of available transmission channels and a corresponding one or more times for one or more subsequent transmissions that include any remaining packets forming the bitstream to allow a corresponding receiver to expect the remaining packets on the identified particular

one or more of the plurality of available transmission channels at the corresponding one or more times.

4. (original) The method of claim 3, wherein:
said network packet structure comprises a header portion and a payload portion,
said payload portion including at least one associated groups of packets.

5. (original) The method of claim 4, wherein:
said network packet structure includes stream identifier and sequence code
information corresponding to said at least one group of packets included within said
payload portion.

6. (cancelled) The method of claim 5, wherein:
said network packet structure includes transmission channel and time of
transmission information.

7. (previously presented) The method of claim 3, wherein said step of
transmitting comprises:
determining a loading of each of a plurality transmission channels;
determining an allocation of bitstream packets among the transmission channels;
and
inserting non-allocated bitstream packets into said transmission channels in place
of said nominally transmitted NULL packets.

8. (original) The method of claim 7, wherein said allocation of bitstream
packets among said transmission channels is determined with respect to at least one of the
following criteria:
transmission channel data rates, bitstream data rate, transmission channel
utilization level, transmission channel loading level, transmission channel scheduling,
bitstream quality of service requirement.

9-12 (cancelled)

13. (currently amended) Apparatus, comprising:

a bitstream processor, for associating each of at least one group of packets forming a bitstream with a stream identifier and a respective sequence code; and

a network interface, for causing said associated at least one group of packets to be inserted into any one of a plurality of available transmission channels in place of NULL packets nominally transmitted in the event of transmission channel underutilization to minimize the underutilization of said transmission channels,

wherein a packet structure associated with ones of said at least one group of packets is adapted to conform to a network packet structure suitable for use by ones of said plurality of available transmission channels,

wherein said network packet structure includes transmission channel and time of transmission information for identifying a particular one or more of the plurality of available transmission channels and a corresponding one or more times for one or more subsequent transmissions that include any remaining packets forming the bitstream to allow a corresponding receiver to expect the remaining packets on the identified particular one or more of the plurality of available transmission channels at the corresponding one or more times.

14. (cancelled) The apparatus of claim 13, wherein said bitstream processor further associates at least one of said at least one group of packets forming said bitstream with channel identification and time of transmission information for, respectively, indicating which of said plurality of available transmission channels will carry respective packet groups from among the at least one group of packets and the time said respective packet groups are carried.

15. (currently amended) The apparatus of claim ~~14~~ 13, wherein said network interface utilizes said channel identification and time of transmission information to

allocate respective transmission channel time slots to ~~said at least one group of packets to be transmitted via an identified channel~~ the remaining packets.

16. (currently amended) A data structure adapted for transport of data via a communications network, said data structure comprising a header portion and a payload portion, said payload portion including at least one packet from an initial bitstream, said at least one packet having associated with it a stream identifier and a sequence code, said stream identifier identifying said initial bitstream, said sequence code identifying a relative position within said initial bitstream of said at least one packet,

wherein said data structure associated with said at least one packet is adapted to conform to a network packet structure suitable for use on at least one of a plurality of available transmission channels, and

wherein said at least one packet associated with said data structure is used to replace at least one NULL packet nominally transmitted in the event of transmission channel underutilization to minimize the underutilization of said transmission channels,

wherein said network packet structure includes transmission channel and time of transmission information for identifying a particular one or more of the plurality of available transmission channels and a corresponding one or more times for one or more subsequent transmissions that include any remaining packets forming the bitstream to allow a corresponding receiver to expect the remaining packets on the identified particular one or more of the plurality of available transmission channels at the corresponding one or more times.

17. (original) The data structure of claim 16, wherein said stream identifier and said sequence code are stored within said header portion of said data structure.

18. (original) The data structure of claim 16, wherein said stream identifier and said sequence code are stored within the payload portion of said data structure.

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19. (cancelled) The data structure of claim 16, wherein said at least one packet is further associated with a channel identification and a time of transmission information for, respectively, indicating which of a plurality of transmission channels will convey said at least one packet and at what time said at least one packet will be conveyed by ones of said plurality of transmission channels.

20. (currently amended) The data structure of claim ~~19~~ 16, wherein said channel identification and time of transmission information are stored within said header portion of said data structure.

21. (currently amended) The data structure of claim ~~19~~ 16, wherein said channel identification and time of transmission information are stored within the payload portion of said data structure.